

IT24101573

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Lab sheet 05

```
> getwd()
[1] "C:/Users/IT24101573/Desktop/IT24101573"
> setwd("C:\\Users\\IT24101573\\Desktop\\IT24101573")
> getwd()
[1] "C:/Users/IT24101573/Desktop/IT24101573"
```

01)

```
[1] "C:/Users/IT24101573/Desktop/IT24101573"
> Delivery_Times <- read.table("Exercise - Lab 05.txt",header = TRUE,sep = ',')
> Delivery_Times
  Delivery_Time_.minutes.
1                      34
2                      54
3                      47
4                      29
5                      39
6                      61
7                      20
8                      40
9                      57
10                     36
11                     38
> fix(Delivery_Times)
> names(Delivery_Times) <- c("x1")
> attach(Delivery_Times)
The following object is masked from data (pos = 3):

  x1

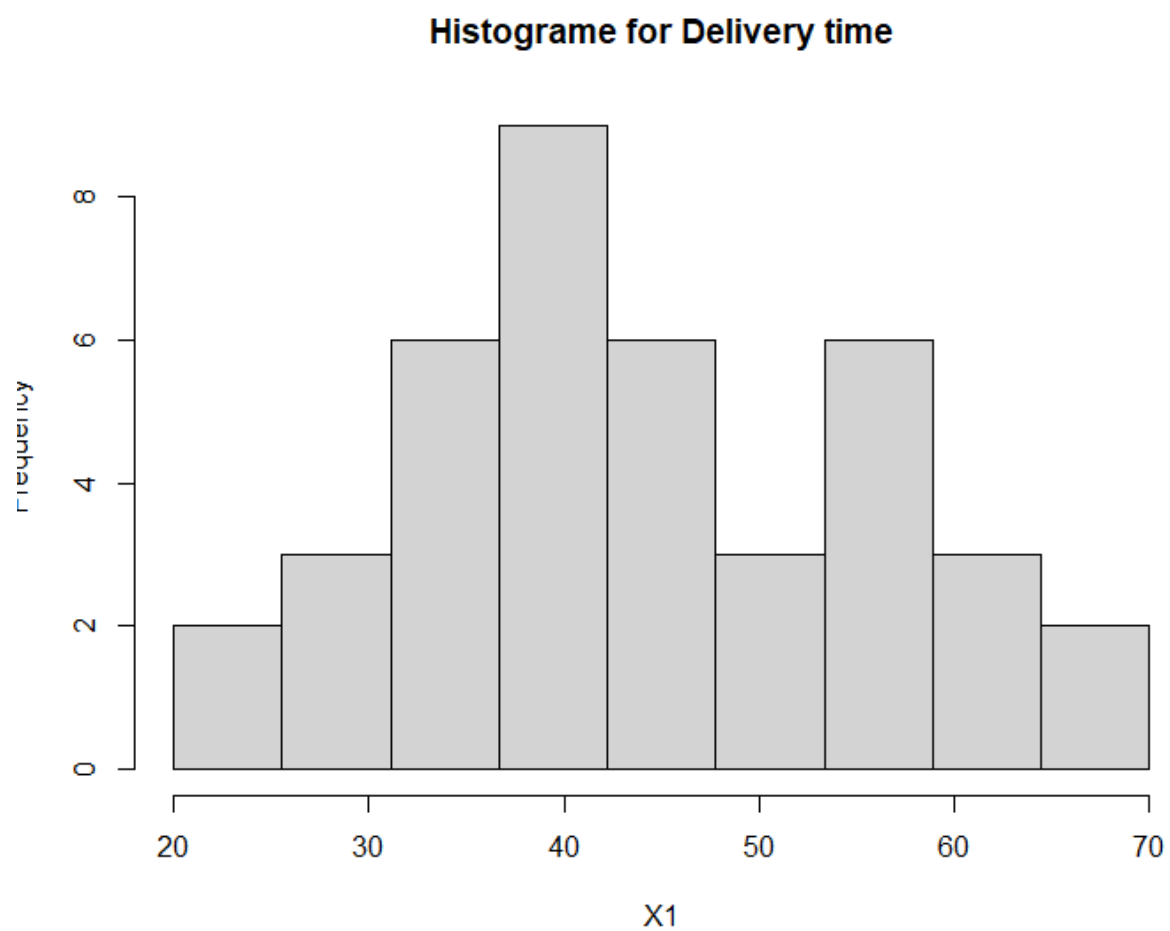
The following object is masked from data (pos = 4):

  x1

> fix(Delivery_Times)
```

02)

```
> histogram <- hist(X1,main = "Histograme for Delivery time",  
+                   breaks = seq(20,70,length = 10),right = TRUE)
```



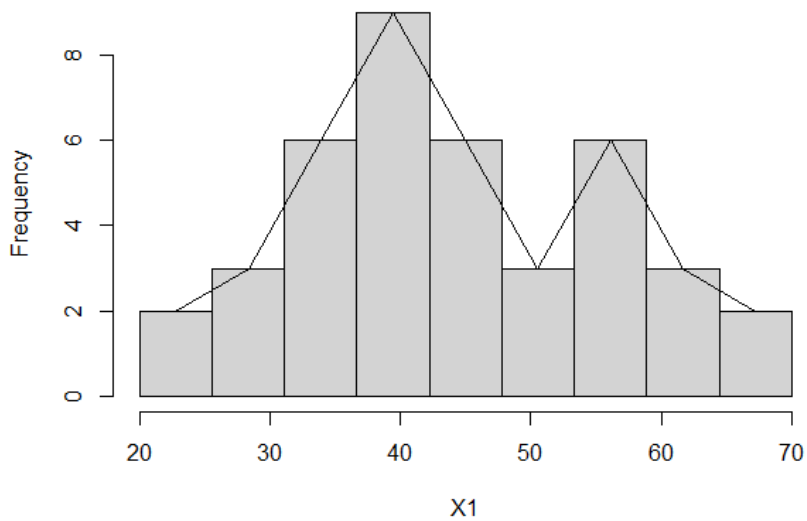
03) The data is spread roughly between 20 and 70 minutes. The delivery time are mostly concentrated around 35-45 minutes. The shape is slightly right skewed. The indicates most deliveries take around 40 minutes.

04)

```
> breaks <- round(histogram$breaks)
> breaks
[1] 20 26 31 37 42 48 53 59 64 70
> freq <- histogram$counts
> freq
[1] 2 3 6 9 6 3 6 3 2
> mids <- histogram$mids
> mids
[1] 22.77778 28.33333 33.88889 39.44444 45.00000 50.55556 56.11111 61.66667 67.22222
```

```
> classes <- c()
> for(i in 1:length(breaks) - 1){
+   classes[i] <- paste0("[",break[i],",",breaks[i+1],")")
+ }
> cbind(classes = classes,frequency = freq)
      frequency
[1,]          2
[2,]          3
[3,]          6
[4,]          9
[5,]          6
[6,]          3
[7,]          6
[8,]          3
[9,]          2
```

Histogramme for Delivery time



```
> cum.freq <- cumsum(freq)
> new <- numeric(length(breaks)) # Initialize 'new' as a numeric vector of the same length as 'breaks'
>
> for(i in 1:length(breaks)){
+   if(i == 1){
+     new[i] = 0
+   } else {
+     new[i] = cum.freq[i - 1]
+   }
+ }
> plot(breaks,new,type = 'l',
+       main = "Cumulative Frequency",
+       xlab="Delivert Time",
+       ylab="Frequency",
+       xlim=c(0, max(cum.freq)))
```

Cumulative Frequency

